WHAT IS CLAIMED IS:

1. A shaped microfabricated capillary array electrophoresis chip comprising:

a planar substrate having a first major surface defining converging first and second elongate separation channels, wherein each said separation channel extends between an associated cathode port and an anode port defined by said first major surface, wherein said substrate further comprises a first perimetrical edge segment extending substantially along said first separation channel, and a second perimetrical edge segment extending substantially along said second separation channel.

2. A shaped microfabricated capillary array electrophoresis chip according to claim 1, wherein each said separation channel extends in fluid communication with a common anode port.

3. A shaped microfabricated capillary array electrophoresis chip according to claim 1, wherein said first major surface further defines an associated sample port and waste port for each said separation channel whereby each said associated sample port and waste port is in fluid communication across a loading segment of a single said separation channel.

4. A shaped microfabricated capillary array electrophoresis chip according to claim 1, wherein each said separation channel extends linearly between its respective said loading segment and said anode port.

5. A shaped microfabricated capillary array electrophoresis chip according to claim 1, wherein said first perimetrical edge and said second perimetrical edge are oriented at an angle therebetween being a whole fraction of 180 degrees.

6. A shaped microfabricated capillary array electrophoresis chip according to claim 1, wherein said first perimetrical edge and said second perimetrical edge are oriented at an angle therebetween being a whole fraction of 360 degrees.

7. A shaped microfabricated capillary array electrophoresis chip according to claim 1, wherein each said cathode port is further in fluid communication with a pair of elongate separation channels.

8. A shaped microfabricated capillary array electrophoresis chip according to claim 1, further comprising a plurality of separation channel groups, wherein each said separation channel group includes a grouped pair of elongate separation channels extending in fluid communication between a common cathode port and anode port, wherein each separation channel of said grouped pair of separation channels further includes a loading segment, whereby said first major surface further defines an associated group sample port and a group waste port for each separation channel of said grouped pair of separation channels wherein each associated group sample port and group waste port are in fluid communication across said loading segment of a single separation channel.

9. A shaped microfabricated capillary array electrophoresis chip according to claim 8, wherein each said separation channel group extend in fluid communication from a common anode port.

10. A method for forming a shaped capillary array electrophoresis chip comprising the steps of:

providing a substantially planar substrate having a first major surface;

forming first and second converging elongate separation channels in said first major surface;

forming a first perimetrical edge segment extending along said first separation channel; and

forming a second perimetrical edge segment extending along said second separation channel.

11. The method of claim 10, further comprising the step of:

forming said first and second perimetrical edge segments to be aligned at an angle being an even fraction of 180 degrees.

12. The method of claim 10, further comprising the step of:

forming said first and second perimetrical edge segments to be aligned at an angle being an even fraction of 360 degrees.

13. The method of claim 10, further comprising the step of:

forming a first cathode port in said first major surface and an anode port in said first major surface wherein said first separation channel extends in fluid communication between said first cathode port and said anode port.

14. The method of claim 13, further comprising the step of:

forming a second cathode port in said first major surface wherein said second separation channel extends in fluid communication between said second cathode port and said anode port.

15. The method of claim 10, further comprising the step of:

forming a first associated sample port and waste port in fluid communication across a loading segment of said first sample channel.

16. The method of claim 10, further comprising the step of:

forming said first sample channel to extend linearly between said loading segment and said anode port.

17. The method of claim 10, further comprising the step of:

forming a plurality of separation channel groups in said first major surface, wherein each said separation channel group includes a grouped pair of elongate separation channels extending in fluid communication between a common cathode port and anode port, wherein each separation channel of said grouped pair of separation channels further includes a loading segment, whereby said first major

surface further defines an associated group sample port and a group waste port for each separation channel of said grouped pair of separation channels wherein each associated group sample port and group waste port are in fluid communication across said loading segment of a single separation channel.

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18. The method of claim 17, wherein said step of forming a plurality of separation channel groups further comprises the step of forming each said grouped pair of separation channels to extend in fluid communication with a common anode port.

19. The method of claim 10, further comprising the step of:
forming 48 converging elongate separation channels in said first major surface.

20. A microfabricated capillary array electrophoresis platform comprising a first chip of claim 1 and a second chip of claim 1, wherein said first perimetrical edge segment of said first chip of claim 1 cooperatively engages one of said first and second perimetrical edge segments of said second chip of claim 1.